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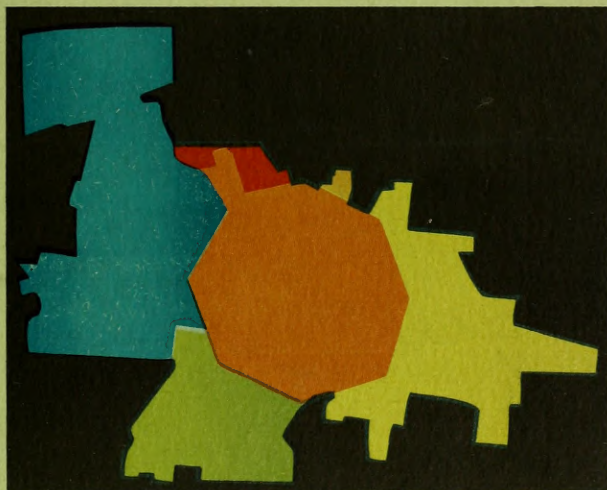
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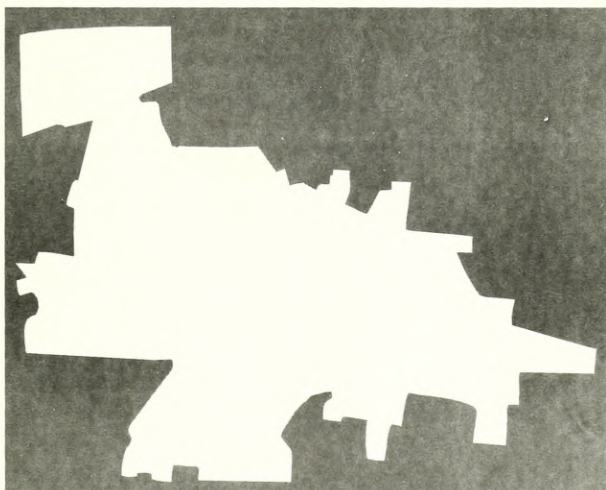
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ANNEXATION STUDY



TAYLORSVILLE
NORTH CAROLINA

ANNEXATION STUDY



TAYLORSVILLE
NORTH CAROLINA

PREPARED FOR:

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March 1965

Price: \$1.00

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G. S. CHAPTER 160, ARTICLE 36

AN ACT PROVIDING A PROCEDURE FOR THE EXTENSION OF MUNICIPAL CORPORATE LIMITS IN MUNICIPALITIES HAVING A POPULATION OF LESS THAN 5,000 PERSONS.

The General Assembly of North Carolina do enact:

G. S. 160-453.1. Declaration of Policy. It is hereby declared as a matter of State Policy:

(a) That sound urban development is essential to the continued economic development of North Carolina;

(b) That municipalities are created to provide the governmental services essential for sound urban development and for the protection of health, safety and welfare in areas being intensively used for residential, commercial, industrial, institutional and government purposes or in areas undergoing such development;

(c) That municipal boundaries should be extended, in accordance with legislative standards applicable throughout the State, to include such areas and to provide the high quality of governmental services needed therein for the public health, safety and welfare; and

(d) That new urban development in and around municipalities having a population of less than 5,000 persons tends to be concentrated close to the municipal boundary rather than being scattered and dispersed as in the vicinity of larger municipalities, so that the legislative standards governing annexation by smaller municipalities can be simpler than those for large municipalities and still attain the objectives set forth in this Section;

(e) That areas annexed to municipalities in accordance with such uniform legislative standards should receive the services provided by the annexing municipality as soon as possible following annexation.

INTRODUCTION

CHAPTER I

INTRODUCTION

The Urban Fringe

The urban fringe of a municipality is a rapidly growing urban area bordering the corporate limits of a city. It is experiencing rapid growth because of a lack of desirable vacant buildable land inside a city. This phenomenon is not something unique to only a handful of cities, but is characteristic of all cities that are gaining in population and economic growth.

Although the population in the fringe has social, ethnic and economic ties with the principal municipality, it has limitations in power or a means of controlling itself and providing itself with services that a principal municipality enjoys. This is one of the main reasons for the existence of municipalities--to provide those necessary urban services to densely populated areas. Typical of the services which heavily populated areas must have are public water and sewerage systems, frequent garbage collections, and street cleaning, superior fire and police protection, street lights, and other related services. As the fringe of a city or town becomes more urbanized it is only logical that the population living in these areas be given the necessary services that the central city enjoys. The best method of obtaining these services is to annex to the principal city or for the city to annex the urban fringe.

The State of North Carolina has recognized that there are growing pains in the fringes of its cities and has passed legislation to enable them to control its development. Extraterritorial zoning and subdivision regulations which control the character of the development for one mile beyond the corporate limits have helped in establishing a good relationship of land uses. But annexation is the best method to achieve permanent responsibility of the fringe area. Before an annexation program is undertaken it is important to investigate the desirability and feasibility of such a program so that a town council can make a better decision on this matter. This is the reason for the preparation of this report.

Purpose

The purpose of this annexation study is to investigate the feasibility for the Town of Taylorsville to annex various contiguous fringe areas which are now or will soon be developed primarily for urban purposes. In investigating feasibility it is important to determine an area that can be annexed, determine the cost to provide the area with the services, and determine the revenue that would be gained by annexation. Once this is complete, costs and revenues can be compared so that a course of action can be determined.

The cost of an annexation program involves capital outlay for water and sewerage systems, street paving and street lighting, plus the annual expenditures for operating departments within the government. Revenue includes taxes whether on personal.

or real property, business taxes or other sources. It is quite evident at this point that for Taylorsville to annex parts of the fringe area, the area should contribute enough in taxes to pay for its added services.

In addition to the financial question of whether it is economically feasible to annex an area, it is important to note certain intangible benefits which cannot be measured in dollars and cents. Among the intangible or unmeasurable factors favoring annexation are:

- (a) the increase in prestige in making a better showing in the next decennial census;
- (b) the town's need for more population in order to qualify for more State funds distributed on a population basis;
- (c) the broadened tax base and increased property valuation for the town which in turn will raise the level of bonded indebtedness;
- (d) the desire to provide the town with prime industrial land with utilities in order to attract future industry;
- (e) the potential or growth trend of a particular area that eventually may contribute to good residential, commercial and industrial developments plus taxes to the town.

People residing in an area to be annexed will also benefit by gaining better police protection, garbage collection, street maintenance, plus water and sewer services which help to remove any threat of health hazards because they do away with unreliable septic tanks and wells. Although the above intangible benefits of annexation will not be all discussed in the following chapters, they should certainly be kept in mind because in some instances

they could possibly outweigh the financial factors.

SUMMARY OF FINDINGS AND CONCLUSIONS

- Annexation of all the Study Areas covered in this report would increase Taylorsville's physical size by 514 acres, its population by 1,940 people and its assessed value by approximately \$3,188,000.
- Annexation of all study areas is the best course of action since some individual study areas do not measure up to State legislation for annexation.
- The increase in the Town's budget to provide expanded services to new areas should amount to about \$86,150 annually.
- The Town will be obligated to maintain 12 additional miles of road and pave approximately half of the amount at a cost of about \$122,000.
- Annual revenues from all study areas would bring in approximately \$49,800.
- The total cost to expand water and sewer facilities to the study areas would amount to approximately \$2,000,000.
- Since the total cost of the water and sewer facilities makes annexation prohibitive from a bonding capacity standpoint, the Town should try to secure a grant from the Federal Government through the Appalachian Program now being considered by Congress.
- The annexation of all study areas would not bring in any profits to the Town. However, certain intangible factors favoring annexation should be considered.

PAST GROWTH

CHAPTER 2

PAST GROWTH

The Town of Taylorsville, North Carolina, is located in the approximate geographic center of Alexander County. The town is easily accessible by North Carolina Highways 90 and 16. Approximately 12 miles east of Taylorsville is the planned location of Interstate 77. Interstate 40 is located about 20 miles south of the town.

The Town of Taylorsville was incorporated in 1847 with corporate limits laid out in an octagon. Between the years of incorporation and 1960 no annexation program was undertaken. After 1960 a small residential area to the north of the town was made a part of the municipality.

The economy of the town is primarily rural-oriented but recently new industrial developments have been making inroads into the local economy. The recent industrial plants that have located in or near the town are related to textile and furniture products.

The population of Taylorsville when the 1960 Census was taken was 1,470 people. It is estimated that the present population is around 1,500 people. A population projection made by the Division of Community Planning indicates that by 1970 and 1980 there will be approximately 1,580 and 1,640 people, respectively. This projection is based on an examination of past growth trends and assumes the town will keep its present corporate limits. The following table shows the past population of Taylorsville and

Taylorsville Township.

TABLE 1 POPULATION GROWTH OF TAYLORSVILLE, NORTH CAROLINA

Year	Taylorsville Township	Per Cent Change	Town of Taylorsville	Per Cent Change
1910	2,551		662	
1920	3,374	+24	1,122	+69
1930	3,499	+ 4	926	-17
1940	3,892	+10	1,122	+17
1950	4,813	+19	1,310	+14
1960	5,810	+17	1,470	+10

1970 (Projection)	6,720		1,580	
1980 (Projection)	7,540		1,640	

It is quite evident from this table that the township is growing at a faster rate than the town, both in numbers and percentages. It is probable that much of the township growth is occurring just beyond the town's corporate limits. A primary reason for this growth in the township is that Taylorsville does not have enough buildable vacant land left that is suitable for the space needs of the residential, industrial and commercial developments.

The annexation program contained in this report is more ambitious than the previous program and if followed through will represent a milestone in the town's annexation history, for it will more than double its physical size and population. The present size of the town is about 514 acres; annexation will

increase it by 1,315 acres. The present population is about 1,500 people; annexation will increase it by 1,940 people. Totally then, the town with annexation would be physically 1,829 acres or 2.86 square miles in area, and 3,440 people strong.

DELINEATED STUDY AREAS

CHAPTER 3

DELINEATED STUDY AREAS

One of the first steps in the preparation of this study was to divide the fringe area into five "study areas" or "statistical units". This was done to provide information in a usable form. With information presented in this manner, the Town Council may decide upon annexation on an area-by-area basis.

The areas selected for study purposes can be seen on Map 1. The areas are large enough in size to include all the developed land contiguous to the existing corporate limits. Those areas delineated for study purposes meet the legal requirements for annexation that will be examined in greater detail in Chapter 4. The areas outlined are not thought of as final. When actual annexation takes place, each one may be broken down into smaller areas if the Town Council so chooses.

The criteria used in delineating study areas for annexation are basically those required by the State -- topographic features and streets. In addition to these, the boundaries were drawn according to interest shown by the town in the area, land use patterns, community identification, and approximate lot lines. See Map 1 for study areas. Although no land survey was made of each study area, the following briefly describes the geographic location of each area in relationship to the town.

Study Area 1

Study Area 1 encompasses an area that lies generally on the west-northwestern fringe of the town. Two North Carolina highways traverse this area: N.C. 90 toward Lenoir and N.C. 16 toward North Wilkesboro. Noted developments that help identify the area are the Milstead subdivision, Watts subdivision, and Snyders Silk Mill. The land uses in the area are varied with residential, commercial and industrial development.

Study Area 2

Study Area 2 is small area north of the town and borders a subdivision that was part of Taylorsville's first annexation program. The primary road that traverses this area is First Street, N.W. The land use is strictly residential.

Study Area 3

Study Area 3 is also a small residential development lying approximately on the northeast border of the town. Fourth Street, N.E., is the primary road in the area.

Study Area 4

Study Area 4 is a large unit bordering the eastern corporate limits of Taylorsville. Area 4 encompasses almost all commercial, industrial and residential development in this fringe section of the town. The major highway traversing this area is Highway 90 or commonly referred to as the Statesville Road.

Study Area 5

Study Area 5 borders the town on the southeast. The two principal roads traversing the area are Highway 16 toward Hickory and the Liledown Road. The southern boundary of the area is at the northern line of the prison unit.

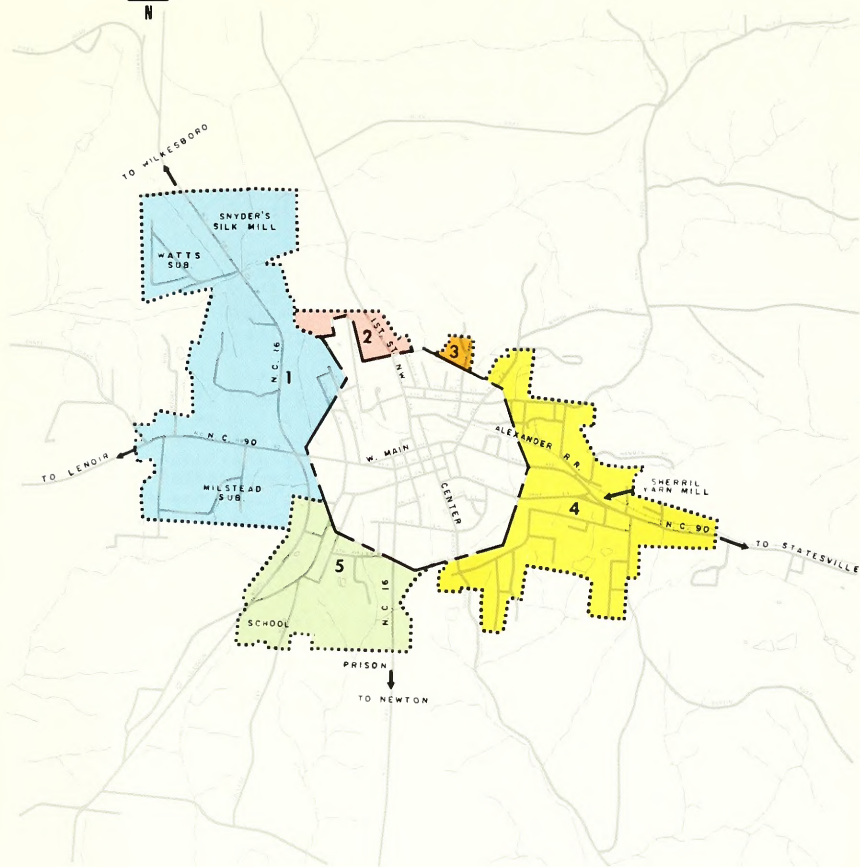
TAYLORSVILLE

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STUDY AREAS



Character of Area to be Annexed. (a) A municipal governing board may extend the municipal corporate limits to include any area which meets the general standards of subsection (b), and which meets the requirements of subsection (c).

(b) The total area to be annexed must meet the following standards:

- (1) It must be adjacent or contiguous to the municipality's boundaries at the time the annexation proceeding is begun.
- (2) At least one-eighth of the aggregate external boundaries of the area must coincide with the municipal boundary.
- (3) No part of the area shall be included within the boundary of another incorporated municipality.

(c) The area to be annexed must be developed for urban purposes. An area developed for urban purposes is defined as any area which is so developed that at least sixty per cent (60%) of the total number of lots and tracts in the area at the time of annexation are used for residential, commercial, industrial, institutional or governmental purposes, and is subdivided into lots and tracts such that at least sixty per cent (60%) of the total acreage, not counting the acreage used at the time of annexation for commercial, industrial, governmental or institutional purposes, consists of lots and tracts five acres or less in size.

(d) In fixing new municipal boundaries, a municipal governing board shall, wherever practical, use natural topographic features such as ridge lines and streams and creeks as boundaries, and if a street is used as a boundary, include within the municipality developed land on both sides of the street.

LEGAL REQUIREMENTS

CHAPTER 4

LEGAL REQUIREMENTS

This part of the report deals with the legal requirements of North Carolina State Annexation Laws, G. S. 160-453.4. Character of the Area to be Annexed. This chapter documents and satisfies the legal requirements of subsections (b) and (c) of the statute.

G. S. 160-453.4. Character of Area to be Annexed.

...

- (b) "The total area to be annexed must meet the following standards:
 - (1) It must be adjacent or contiguous to the municipality's boundaries at the time the annexation proceeding is begun."

This requirement is easily satisfied as all the study areas dealt with in this report are contiguous to the town's political boundaries.

Subsection (b) continues ...

- (2) "At least one-eighth of the aggregate external boundaries of the area must coincide with the municipal boundary."

This requirement is easily satisfied for all study areas. Proof of this is shown on the following Table 2. Reading left to right, the first column gives the number of feet in the perimeter of the study area; the second column gives the number of feet of the perimeter that is contiguous with the present municipal boundary, and; the third column indicates the percentage of

the perimeter that is contiguous to the municipal boundaries. For an area to qualify, its boundaries must be not less than 12.5 per cent contiguous with the town limits. All study areas easily meet this requirement.

TABLE 2 PER CENT OF STUDY AREA CONTIGUOUS WITH TOWN LIMITS

Study Area	Total Perimeter	Amount of Perimeter Contiguous	Per Cent Contiguous
1	31,160 feet	5,180 feet	16.6
2	8,310 feet	4,170 feet	50.2
3	4,010 feet	1,070 feet	26.7
4	30,120 feet	5,620 feet	18.7
5	17,370 feet	3,550 feet	20.4
Entire Area	86,710 feet	19,590 feet	22.3

Subsection (b) continues ...

- (3) "No part of the area (to be annexed) shall be included within the boundary of another incorporated municipality."

None of the areas recommended for annexation is incorporated.

Subsection (c):

"The area to be annexed must be developed for urban purposes. An area developed for urban purposes is defined as any area which is so developed that at least sixty per cent (60%) of the total number of lots and tracts in the area at the time of annexation are used for residential, commercial, industrial, institutional, or governmental purposes, and is subdivided into lots and tracts such that at least sixty per cent (60%) of the total acreage, not counting the acreage used at the time of annexation for commercial, industrial, governmental or institutional purposes consists of lots and tracts five acres or less in size."

In meeting the requirements of this subsection the entire urban area of Taylorsville was mapped from aerial photography. Using these maps, a field survey was undertaken to determine the use of land. In determining the degree of land, subdivision assessment rolls were provided by Alexander County. These rolls helped to ascertain who owned property in the study areas, how much acreage they owned, and what the assessed values were. Aerial photography was also used as an aid in determining land subdivision.

Once this information was assembled it was transferred to maps to obtain a better overall picture of what could be annexed to the town in light of State annexation requirements. The land use and the subdivision of land were then computed from these maps. A land use map (Map 2) and a map showing the approximate subdivision of land (Map 3) are contained in this text. The computations of land use and subdivision of land are contained in Tables 3 and 4. These two tables help to show which areas satisfy the annexation requirements under discussion.

TABLE 3

EXISTING LAND USE - IN ACRES

	1	2	3	4	5	Total
Residential	339.5	22.9	14.9	213.0	153.5	743.6
Institutional or Governmental	5.2	--	.2	11.8	13.0	30.2
Commercial	10.1	--	--	7.9	1.6	19.6
Industrial	86.6	--	--	17.4	9.2	113.2
Land Used for Urban Purposes	441.4	22.9	15.1	250.1	177.3	906.8
Undeveloped	205.5	16.1	2.5	127.8	56.2	408.1
Total Area	646.9	39.0	17.5	377.9	233.5	1,314.9
Percentage of Area Developed	68.2	58.7	85.8	66.2	75.9	68.9

Annexation Requirement: at least sixty per cent (60%) of the total area must be developed for urban purposes.

TABLE 4

SUBDIVISION OF LAND

	1	2	3	4	5	Total
Acres of Land in Tracts or Parcels 5 Acres or Less	315.1	29.2	17.6	274.9	118.5	755.3
Acres of Land in Tracts or Parcels Greater than 5 Acres	229.9	10.2	--	65.9	91.2	397.2
Percentage of Land in 5-Acre Tracts or Less	57.8	74.1	100.0	80.7	56.5	65.5

Annexation Requirement: at least sixty per cent (60%) of the lots or tracts in the area must be in 5 acres or less exclusive of commercial, industrial, institutional, or governmental use.

Of interest in Table 3, Existing Land Use, is the amount and percentage of land that are used for urban purposes. Out of five study areas shown on this table, only one area (Study Area 2) does not qualify. It has less than 60 per cent of its area developed for urban purposes. This means that if the town annexed the study areas on a priority basis, or piecemeal basis, Study Area 2 would not qualify. However, this does not mean that the town cannot annex Study Area 2. If the piecemeal approach were thrown out and all study areas viewed as one, Study Area 2 plus all the others could be annexed to the town. A check with the column on the right of Table 3 bears this out. The totals for all study areas indicate that out of a total of 1,314.9 acres of land, 906.8 acres are used for urban purposes. In terms of a per cent, 68.9 per cent of the total area is used for urban purposes. This is well over the 60 per cent factor needed for an area to qualify.

The second part of section (c) requires that the area to be annexed have 60 per cent of its land subdivided into tracts or parcels of five acres or less, exclusive of commercial, industrial, institutional or governmental use. Table 4 shows this breakdown and Map 3 indicates the parcels of land that are greater than five acres.

In Table 4 a similar situation exists that was evident in Table 3 on land use; that is, two of the study areas, Numbers 1 and 5, do not exceed five acres; however, the town could annex the area if all study areas were annexed at the same time. In this manner the study areas that have a higher percentage of the

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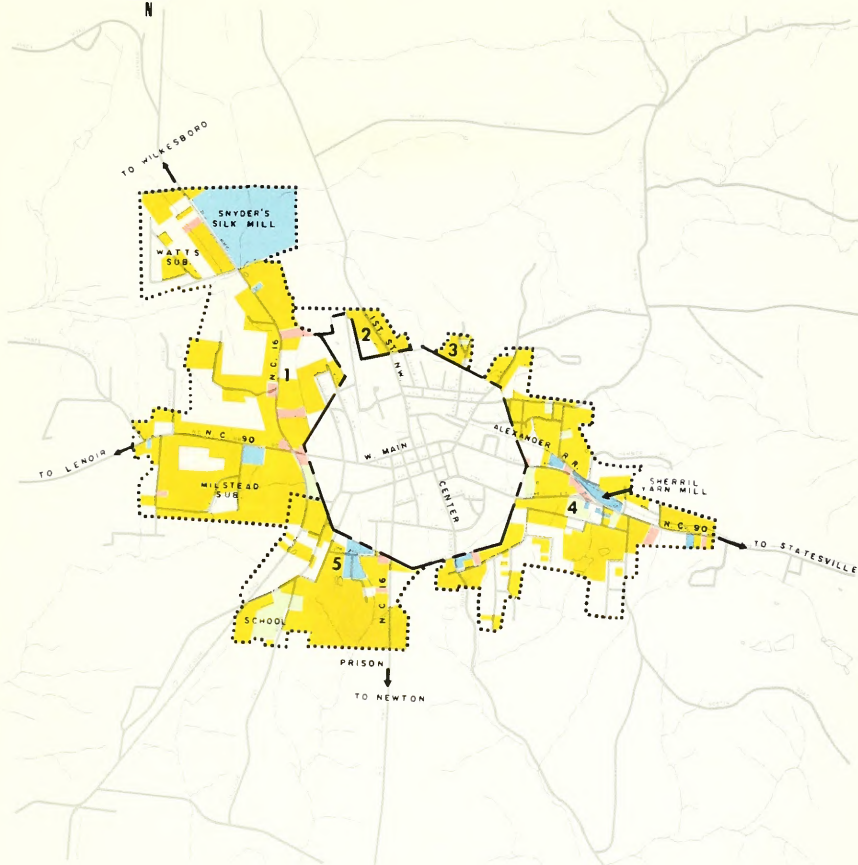
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EXISTING LAND USE

USING ANNEXATION LAW CRITERIA
(SEE CHAPTER 4)



LEGEND

	INDUSTRIAL		RESIDENTIAL
	INSTITUTIONAL		COMMERCIAL
	STUDY AREA BOUNDARIES		

TAYLORSVILLE

North Carolina

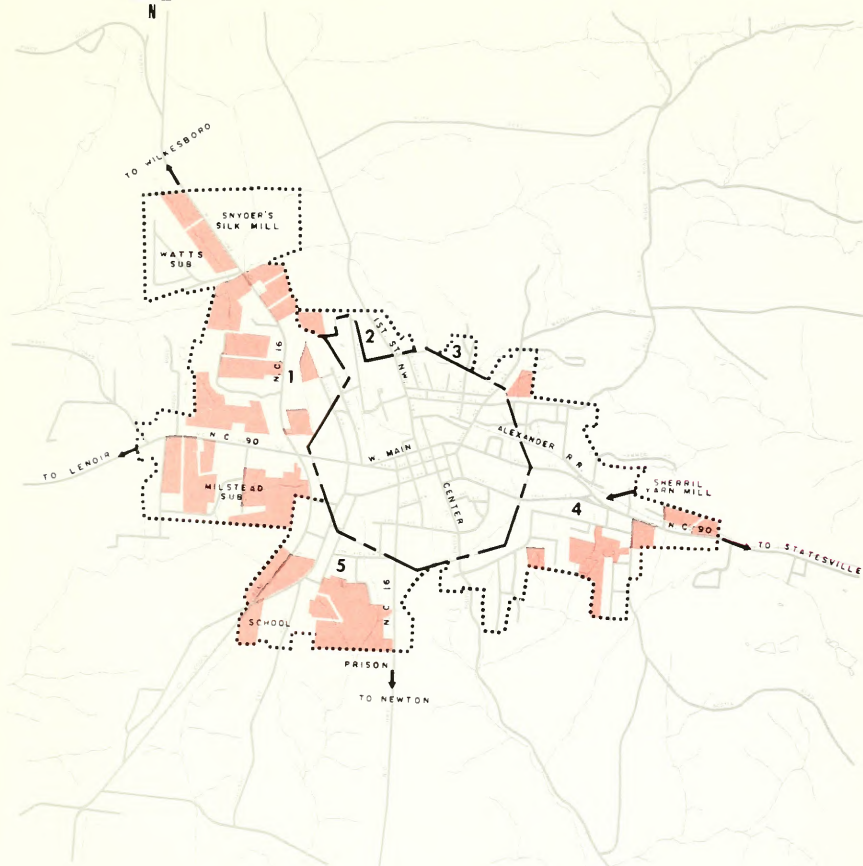
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TRACTS OF LAND

FIVE ACRES & MORE

(SEE CHAPTER 4)



land subdivided help to offset the areas that have a lesser percentage. Therefore, if all study areas are viewed as one, 65.5 per cent of the land area within the proposed corporate limit line is subdivided into five acre tracts or less. The total area then qualifies for annexation.

- (d) "In fixing new municipal boundaries, a municipal governing board shall, wherever practical, use natural topographic features such as ridge lines and streams and creeks as boundaries, and if a street is used as a boundary, include within the municipality developed land on both sides of the street."

In preparing the recommended corporate limit line, the above requirements were followed. In addition, property lines were used in some instances.

Table 5 presents a summary of the study areas and indicates how they correspond with the legal requirements of annexation that necessitated calculations.

TABLE 5 CORRESPONDENCE OF STUDY AREAS WITH LEGAL REQUIREMENTS

Study Area	(1)	(2)	(3)	(4)
	Per Cent of Boundary Contiguous	Per Cent of Land Used for Urban Purposes	Per Cent of Land Area Subdivided into 5-acre Tracts or Less	How They Qualify
1	16.6	68.2	57.8	(1,2)
2	50.2	58.7	74.1	(1,3)
3	26.7	85.8	100.0	(1,2,3)
4	18.7	66.2	80.7	(1,2,3)
5	20.4	75.9	56.5	(1,2)
Total Area	22.3	68.9	65.5	(1,2,3)

The conclusion reached in this section of the report is that the Town of Taylorsville should not undertake a piecemeal annexation program on the basis of the study areas delineated, due to the fact that some of the areas, if annexed alone, would not meet the State legal requirements. The best course of action would be to annex all areas at one time because when viewed totally, the areas satisfy the requirements. This conclusion was also reached by the consulting engineers which is discussed further in Chapter 6.

Prerequisites to Annexation: Ability to Serve. A municipality exercising authority under this Act shall make plans for the extension of services to the area proposed to be annexed and shall, prior to the public hearing provided for in Section 5 of this Act, prepare a report setting forth such plans to provide services to such area. The report shall include:

(a) A map or maps of the municipality and adjacent territory to show the following information:

(1) The present and proposed boundaries of the municipality.

(2) The proposed extensions of water mains and sewer outfalls to serve the annexed area, if such utilities are operated by the municipality.

(b) A statement showing that the area to be annexed meets the requirements of Section 4 of this Act.

(c) A statement setting forth the plans of the municipality for extending to the area to be annexed each major service performed within the municipality at the time of annexation. Specifically, such plans shall:

(1) Provide for extending police protection, fire protection, garbage collection and street maintenance services to the area to be annexed on the date of annexation on substantially the same basis and in the same manner as such services are provided within the rest of the municipality prior to annexation. If a water distribution system is not available in the area to be annexed, the plans must call for reasonably effective fire protection services until such time as water lines are made available in such area under existing municipal policies for the extension of water lines.

(2) Provide for extension of water mains and sewer lines into the area to be annexed so that property owners in the area to be annexed will be able to secure public water and sewer services according to the policies in effect in such municipality for extending water and sewer lines to individual lots or subdivisions. If the municipality must, at its own expense, extend water and/or sewer mains into the area to be annexed before property owners in the area can, according to municipal policies, make such connection to such lines, then the plans must call for contracts to be let and construction to begin on such lines within one year following the effective date of annexation.

(3) Set forth the method under which the municipality plans to finance extension of services into the area to be annexed.

ESTIMATES OF EXPENDITURES AND REVENUE

CHAPTER 5

ESTIMATES OF EXPENDITURES AND REVENUES

An important requisite for annexation by North Carolina communities is that municipal services shall be extended to newly annexed areas as soon as possible following annexation. These municipal services include the extension of police protection, fire protection, garbage collection and street maintenance. These services should be provided on substantially the same basis and in the same manner as such services are provided within the municipality. Water and sewer facilities are two more important services that must be extended to newly annexed areas.

North Carolina communities are required by State Law (G. S. 160-453.3) to extend the above mentioned services to newly annexed areas. This being the case, it is important that a town, before annexing areas, prepare cost estimates and examine methods of financing the services so that a better understanding of the town's involvement in terms of dollars and cents is determined. This chapter and Chapter 6 provide this information.

METHODOLOGY

The methodology used in determining estimates of expenditures and revenues is outlined below. Water and sewer estimates are not contained in this chapter but are discussed in a separate chapter.

Population. A count of all dwelling units in each study area was made. The 1960 Census indicates that there were 3.53 persons

per dwelling unit in Taylorsville Township. Multiplying this times the dwelling units, results in the population estimate.

Street Department. The annual expenditure for the 1963-64 fiscal year was divided by the Town's estimated 1964 population of 1500 people to obtain the annual cost per capita. Multiplying the per capita cost times the population in each study area results in estimated expenditures for the street department.

Fire Department. The annual expenditure for the fiscal year of 1963-64 was divided by the Town's estimated 1964 population to obtain the annual cost per capita. This figure was then multiplied by the population in the study areas to obtain the estimated expenditure.

Police Department. These estimates were made in the same manner as the fire department.

Administration. These estimates were made in the same manner as the fire department.

Paving Costs are based on the assumption that the present practice of paving streets without curb and gutter will be followed. Based on past paving projects the cost is running about \$4 per lineal foot. This figure was multiplied times the street mileage of unpaved streets that the town will be responsible for with annexation.

Street Light Costs. The present cost to operate 4,000 lumen lights in Taylorsville is \$2.15 per month. Estimates were made as to the location and number (generally spaced at about every

600 feet and at all intersections).

Advalorem Taxes. These taxes are on both real and personal property. The estimates are based on current valuation of property in the study areas multiplied against the current town tax rate of \$1.35 per \$100 assessed value.

Powell Bill Funds. The estimates for these revenues are based on the current method of distribution of \$1.89 per capita based on the 1960 Census and \$450 per mile for each mile of non-state maintained streets.

Privilege Tax. The present town rates were applied against the number of businesses found in each area.

License Plates. The estimated number of families were applied against the license fee of \$1.00. Here it is assumed that there is one car per family.

In presenting the estimates of expenditures and revenues, the totals of individual study areas will not be discussed. This is done because Chapter 4 concluded that if the Town is going to annex, it should take in all areas at one time. However, the information contained in Tables 6 and 7 is broken down into units to facilitate comparison.

The estimates contained in Tables 6 and 7 are made on a one-year basis. A longer period of time was not selected because information was not available to make a valid projection of expenditures and revenues. Also, a longer period of time would not present an accurate financial picture because of several

variables such as changing valuations, tax structures, wages, manpower and equipment costs. The estimates contained herein are all based on current rates of taxation and service costs.

ESTIMATES OF EXPENDITURES

The service functions operated by the Town of Taylorsville and financed by the general fund, are performed by four departments: Street, Fire, Police and Administration. In estimating the cost to expand the services of these departments the present per capita cost was determined and applied against the number of people living in the study areas. Estimating probable expenditures in such a manner certainly employs several major assumptions, a list of which follows:

- That the present level of service provided by the departments is good;
- That the departments are not now in need of more personnel and equipment to maintain present service;
- That the present number of men and equipment cannot handle an increased work load due to annexation;
- That the cost to expand municipal services will increase proportionately with the increase in population as a result of annexation;
- That the number of personnel and equipment used in present operations will expand in proportion to the increase in new population and greater area of service.

Street Department

The Street Department in Taylorsville is responsible for grading and maintaining existing streets only, and not construct-

ing new streets. Because of lack of equipment the work is contracted out.

Garbage and refuse collection is another responsibility of this department. Three men on a 1962 packer-type truck are utilized in performing this service. The present method of disposal is by incineration but the town is considering a land fill type of disposal.

The present annual expense to operate this department is \$27,577 or \$18.38 per capita (based on an estimated 1964 population of 1500 people). To expand this service to a new area then will require \$18.38 per capita. If the town expands its corporate limits to include all study areas which totally contain an estimated 1,941 people, the increased annual expense would be around \$35,675. (See Table 6). These figures allow for added personnel necessary to provide the expanded service. If the town could expand this service to new areas without adding more men and equipment, the cost would be much less.

Fire Department

The Fire Department in Taylorsville is primarily a county operation with manpower consisting of volunteers. However, the town does contribute about \$1,250 or \$.83 per capita annually. This money is used primarily to compensate a staff of 20 volunteers for their time plus the purchase of necessary supplies. At \$.83 per capita, the total annual cost to the new residents would be about \$1,610 annually. This figure will increase in the near future because full-time personnel is planned to be added.

Police Department

The preservation of law and order and the protection of life and property in Taylorsville is the responsibility of a five-man force. The department utilizes one car for patrol duty that is equipped with a two-way radio in performing this service.

The existing per capita cost to provide police protection is \$16.27. At this rate the cost to expand this service to all study areas would be increased by approximately \$31,578 annually. This amount would allow the department to double its staff and operating costs. However, it has been reported that the present staff could serve any newly annexed area without any difficulty. Should the Town decide to do this, there would be no significant increase in cost.

Administration Department

The Administration Department is currently operating on general fund revenues totalling about \$11,200 a year. This is a per capita cost of \$7.42. With approximately 1,941 people in the five study areas the cost to expand this department would be approximately \$14,000 annually. This amount would cover the increased expenditures for social security, insurance tax collection and other similar expenses that would increase due to expansion of all departments and areas of jurisdiction as a result of annexation.

Paving Costs

In addition to the increases in cost to expand departmental

services in annexed areas there are also other capital costs that the town will be required to make. One of the capital costs would be in streets.

In Taylorsville's last study sent to the State Highway Commission on the town's road situation it was reported that the municipality was maintaining a total street mileage of 8.38 miles. For this responsibility, the town received about \$7,000 in Powell Bill Funds. This amount will increase with annexation because the town will be responsible for more roads.

If Taylorsville annexes the areas under study in this report the town can add about 12 more miles to the above mileage. Of this amount 6.24 are paved and 5.76 are unpaved. To pave the latter amount will cost the town about \$122,000. Maintenance estimates were not made and it is assumed that the estimate to operate the street department will cover such costs.

Street Lighting Costs

Street lighting costs will increase significantly with annexation. The current monthly bill runs about \$315 per month. This figure will increase by \$240 per month or about \$2,890.

TABLE 6 ESTIMATED INCREASED ANNUAL EXPENDITURES

	Study Areas	1	2	3	4	5	TOTAL
Street Dept.	\$12,149	\$ 772	\$1,102	\$15,476	\$ 6,175	\$ 35,674	
Fire Dept.	548	35	50	698	279	1,610	
Police Dept.	10,754	683	976	13,699	5,466	31,578	
Administration	4,904	311	445	6,247	2,493	14,400	
Street Lighting Costs	980	103	51	1,161	593	2,888	
TOTALS	\$29,335	\$1,904	\$2,624	\$37,281	\$15,006	\$ 86,150	
*STREET PAVING COSTS	\$64,840	---	\$5,700	\$46,040	\$ 5,070	\$121,650	

*Paving costs are estimates of the entire network of streets to be paved and are not figured as an annual cost.

ESTIMATES OF REVENUE

The sources of revenue discussed below are advalorem taxes, privilege license, sale of automobile license plates, and Powell Bill Funds. Although there are other sources of revenue currently being used by the town, they do not amount to enough to justify being included in this report.

Advalorem Taxes

Advalorem taxes, which include the taxes received from both real and personal property, are the major sources of revenue from the areas under discussion. (See Table 7). At the current tax rate of \$1.35 per \$100 assessed value, Taylorsville would receive from all study areas about \$43,041 annually based on an assessed value of \$3,188,098. Of course, should the tax rate and assessed

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value increase, there would be a corresponding increase in the yield.

One other point should be brought out in regards to revenue from this source, and that is that the estimates of the assessed values for the study areas are low. In determining the assessed values of study areas, a list of property owners and respective assessed values were provided by the County; however, it was found that the list was incomplete. Thus, the results are a low estimate of the assessed value and the results tabulated on Table 7 can at best give a reasonable picture of expected revenues.

Powell Bill Funds

Powell Bill Funds are State revenues derived from a tax on gasoline. The money received is paid back to the municipality on two bases: (1) \$1.89 per capita based on the latest decennial census, and (2) \$450 per mile for each mile of non-state maintained streets within the corporate limits.

In the per capita method of distribution, the town would not start receiving this money until after the 1970 Census, at which time the exact number of people living in the annexed area would be counted.

Unlike the first method of distribution, the second one would provide revenues more immediately because mileage figures can be computed more accurately. In the five study areas there are about 15.5 miles of road now being maintained by the State. Should the town annex the areas, it would take over responsibility

for approximately 12 miles which, in turn, would yield approximately \$5,400 a year in revenue to improve the streets.

Privilege Tax

Based on present rates and establishments in the study areas, this tax would bring in about \$375 per year in revenue.

License Plates

Present revenues from this source amount to about \$600 per year. By annexing the study areas the town would receive an estimated additional \$963 in annual revenues.

TABLE 7 ESTIMATED INCREASED ANNUAL REVENUES

Study Areas	1	2	3	4	5	TOTAL
Advalorem Tax	\$28,785	\$647	\$306	\$8,651	\$4,652	\$43,041
Privilege License	110	--	--	210	55	375
License Plates	330	21	30	420	162	963
Powell Bill Per Mile	1,643	167	122	2,354	1,112	5,398
TOTALS	\$30,868	\$835	\$458	\$11,635	\$5,981	\$49,777
Powell Bill Fund Per Capita ¹	\$ 874	\$ 56	\$ 80	\$ 1,114	\$ 444	\$ 2,568

¹ Powell Bill money is received on a per capita basis after the last census. The town would not receive this money until after 1970.

TABLE 8 BALANCE SHEET - ANNUAL EXPENDITURES AND REVENUES

Study Areas	1	2	3	4	5	TOTAL
Expenditures	\$29,335	\$1,904	\$2,624	\$37,281	\$15,006	\$86,150
Revenues	30,868	835	458	11,635	5,981	49,777
TOTALS	+\$ 1,533	-\$1,069	-\$2,166	-\$25,646	-\$9,025	-\$36,373

Table 8 is a balance sheet indicating the differences by study areas in estimated expenditures and revenues. The results indicate that Study Area 1 is the only area that will be self-supporting if annexed. Study Areas 2 and 3 come reasonably close to paying their way, but Areas 4 and 5 obviously do not. The reason that Study Area 1 appears to pay its way is because of a large mill in the area that has an assessed value close to \$1,500,000. However, it should be remembered from Chapter 4 that Study Area 1, as it stands alone, does not meet the legal requirements for annexation.

Although Study Areas 2 and 3 come close to paying their way it should be pointed out that the areas are relatively small in acreage and are fairly well-developed. In contrast, Study Areas 4 and 5 will involve greater deficit spending to annex but the acreages are larger, and based on development trends these areas offer the best in development potential.

From the above discussion it appears that the town should not annex an area unless the area annexed will bring in a profit. It should therefore be pointed out that there are areas already

within the town that may not contribute enough revenue to cover the expenditures they create. But the health, safety and general welfare of the whole community demand that they be a part of the town. Since towns are created to provide for the health, safety and general welfare of an incorporated area, it is equally justifiable that services be provided for the entire urban area, since the fringe area is essentially an integral part of the same town.

The expenditures for the areas as indicated in Table 6 are considered as reasonable expenditures considering the physical size and population that would be annexed. They at least offer a means of weighing the annexation proposals. If the town decided to offer the areas service on existing manpower and equipment, revenue would be greater than expenditures and the town could then annex. But to be realistic, there would be some cost to expand services and it should be considered. The actual expenditures for services in the study areas will be more readily determined after a few years of service to the area.

TABLE 9 MISCELLANEOUS DATA

Study Areas	Assessed Value Personal and Real Property	Number of Dwelling Units	Estimated Population
1	\$2,132,063	187	661
2	47,756	12	42
3	22,685	17	60
4	640,778	238	842
5	344,816	95	336
TOTAL	\$3,188,098	549	1,941

WATER AND SEWER FACILITIES

CHAPTER 6

WATER AND SEWER FACILITIES

As a part of an annexation program the cost to extend water and sewer facilities without a doubt represents the largest expenditure of money that a municipality will make in providing services to newly annexed areas. It is probably this chapter of the report that will best determine the future course of action of town officials in regards to annexation. It deals more with immediate capital costs and the bonding capacity of the town in addition to anticipated revenues from such systems. Other municipal services can be provided immediately without significant increase in cost, but not water and sewer services.

This part of the report presents a condensation of the Preliminary Report on Water and Sewer Facilities, Town of Taylorsville, North Carolina, prepared by Moore, Gardner and Associates, Inc., Consulting Engineers. The findings and conclusions of the report were presented in preliminary form to the Town Council at the same time as the other Chapters of this report.

It is the purpose of this section to give the findings of the Engineers relative to the economic feasibility of annexing the proposed areas insofar as construction of water and sewer facilities within the areas is concerned. In preparing cost estimates the Engineers found that from an engineering standpoint it was an impractical approach to consider annexation on the basis of five study areas as previously discussed; therefore all study areas were considered as one.

PRELIMINARY REPORT*
WATER AND SEWER FACILITIES
TOWN OF TAYLORSVILLE
ALEXANDER COUNTY - NORTH CAROLINA

WATER AND SEWER FACILITIES

Water System

The source of water for the Town of Taylorsville at the current time is from deep wells which have been supplying good water for the present population. However, the town is looking into the future and anticipates a water shortage and therefore made a surface water survey in 1963. The results of the study indicated that the town would need to borrow approximately \$700,000 in order to establish an adequate water supply for future purposes.

Since the study was completed, the Alexander Water Association has been formed outside the town and has agreed to furnish treated water to Taylorsville in ample quantities to serve its needs. With ample water now available, the town no longer needs to proceed on its own to establish a supply of water.

The existing water distribution system is limited to a network of six and eight inch mains within the corporate limits. The Engineers have recommended strengthening the existing system and if annexation takes place, more improvements will be necessary in order to provide fire flows of water within the present and annexed areas. The strengthening of the system would be with twelve and ten inch mains.

Only one water reservoir is in use by the town and it has a capacity of 275,000 gallons. The Engineers have proposed to enhance water storage by construction of a new 750,000 gallon reservoir. With two water reservoirs in operation, water would be pumped to them by the Alexander Water Association.

Sewerage System

In 1956 the Town of Taylorsville constructed a collection system to serve all areas within the corporate limits. With annexation, the town will be required to expand the system to serve the new areas.

The Engineers have prepared preliminary plans on expansion of the system and they have found that because of topographic and drainage features, three new pumping stations will be required in order to pump waste to the present waste treatment plant.

At the time the collection system was built in 1956 a secondary type waste treatment plant was constructed. It has a capacity of 200,000 gallons per day. With annexation, the Engineers have proposed that the plant be expanded by 300,000 gallons per day. This expansion will take care of the community until 1980.

Construction Costs

Preliminary plans for construction of the water and sewer improvements have been prepared by the Engineers in careful detail. From these plans, cost estimates have been made that are reasonably accurate and closely applicable to the expected construction cost.

The cost estimates prepared by the Engineers total \$775,000 for construction of water facilities and \$1,250,000 for sewer facilities. The total amount of the two projects is \$2,025,000 and it may qualify for a Federal Government grant under the Appalachian Program now under consideration by the Congress of the United States. If this program is approved, the grant available may be equal to 50 per cent of the total eligible cost.

The eligible costs include everything except acquisition of land and interest on the loan. With \$98,000 estimated as ineligible costs by the Engineers, this would leave \$1,927,000 as eligible for the grant. The total anticipated grant would then total \$963,500.

Should the town secure the grant, it would be necessary for the town to authorize bonds for financing an amount of \$1,061,500 (\$963,500 + \$98,000 in ineligible costs) to cover the water and sewer projects. This cost of \$1,061,500 in bonds, when coupled with the present outstanding indebtedness of \$160,000, would equal a debt-to-valuation ratio of 16.3 per cent when based on

the current corporate value of the town at \$4,300,000 for the presently incorporated area, plus \$3,188,000 for the area proposed for annexation, or a total valuation of \$7,488,000. This proposed project could not be considered feasible unless grant funds are secured from the Federal Government to assist the town in holding bonded indebtedness to a reasonable level based on the valuation of property within the area.

Debt Service Cost

There are many factors yet to be resolved before an actual cost to the town for debt service can be determined -- such as availability of a grant for assistance in financing the project and final determination of areas to be annexed. For the purposes of the Engineer's preliminary report, it is being assumed that the project will cover the total area projected and that the town will qualify for a grant. Under the above circumstances, total capital expenditures for the town would be fixed at \$1,062,000.

Should the Town of Taylorsville issue General Obligation Bonds with maturities extending over a thirty-year period, then the average cost of debt service to retire these bonds would be \$53.33 per \$1,000 per year, based on the sale of the bonds at an average interest rate of 4 per cent. The cost to the town would therefore equal an average of $53.33 \times 1,062$, or \$56,636.46. The town is advised that the above estimate is based upon an average cost of amortization. The cost of the first year of debt service after bonds are issued would carry interest on the full amount of bonds plus any applicable payment on principal. According to legal requirements for bonds, the maximum principal payment cannot be more than $2\frac{1}{2}$ times the minimum payment; therefore, the minimum payment on principal would necessarily be in the range of \$25,000. This principal payment of \$25,000 plus interest at 4 per cent on the full \$1,062,000 would be equal to interest in an amount of \$42,480, thus requiring a maximum debt service payment of \$67,480 at or near the beginning of the project.

The Local Government Commission of the State of North Carolina should be contacted about an amortization schedule that would best serve the interests of the Town of Taylorsville. Approval of this Commission is mandatory before any action can be taken toward financing a project of the nature described in this report.

In addition to the above debt service cost would be added the debt service requirement for the present bonded indebtedness. The present debt service requirement from the budget report for 1963-64 is \$14,630. This budget also states that \$5,000

is to come from utility sales and it is assumed that the remaining \$9,630 is coming from current advalorem taxes. In any event, total debt service would be the current \$14,630 added to projected new costs of \$67,480 for a total annual cost of \$82,110.

Water Rates

Water and sewer facilities of the Town of Taylorsville may be placed in excellent condition for servicing the present corporate area together with adequate service for the areas proposed for annexation within the limits of the funds heretofore set out in the cost estimates -- providing prices for construction are held reasonably stable until such time as contracts can be made for construction of the system. A summary of system expenses as related to incomes from the water and sewer system will be given hereinafter.

Cost of operation of the water and sewer systems including cost of operation, administration, maintenance, repairs, debt service and a reasonable amount for capital outlay could be fixed at the following amounts:

Operational Costs	\$ 65,192.00
Debt Service Costs	<u>82,110.00</u>
Total Water and Sewer System Cost	<u>\$147,302.00</u>

Water and sewer rates should be designed to produce revenue in an amount, as nearly sufficient as possible, to meet the requirements for these utilities. With this criteria in mind, a study of the existing rates has been made which reveals an income of \$38,637.75 for the 1963-64 fiscal year. The revenue reported is from service rendered inside the present corporate limits plus amounts sold to customers outside the corporate limits.

The income of \$38,637.75 includes water rents from both "in-town" and "out-of-town" consumers and in the absence of detailed information on the source of income, it is assumed that \$5,000 of the present income is from "out-of-town" consumers. Should the annexation program be made effective, the annexed area would contain 549 residential users compared with 469 in the present area, plus two additional manufacturing operations, 43 additional commercial establishments five service stations and other miscellaneous connections for a total of 617 possible connections. From a review of the "in-town" and "out-of-town" conditions, it is the Engineer's opinion that connections with the water and sewer system out-of-town should produce revenue

equal to current revenue from in-town consumers after a connection period of one year after completion. Based on the above assumption, in-town revenue is \$33,637 plus expected out-of-town revenue in an equal amount, which produces \$67,274 based upon present taxes.

Water rates in Taylorsville are relatively low at \$1.25 for the first 2,000 gallons, next 8,000 gallons at \$0.45 per 1,000 gallons, next 15,000 gallons at \$0.40 per 1,000 gallons, next 25,000 gallons at \$0.35 per 1,000 gallons and all over 50,000 gallons at \$0.20 per 1,000 gallons, with all sewer connections subject to a flat charge of \$1.00 each. The Engineer estimates that the \$1.00 sewer charge would produce approximately \$6,000 in revenue, thus the in-town water consumers, at current rates, would produce \$27,637 in water revenue.

From the analysis of water income heretofore given, the Engineers would recommend the amending of the water rates schedule to produce twice the present revenue. With the production of twice the revenue in mind, the Engineers would recommend consideration of the following monthly rate schedule:

Water Rates (In-Town)

Minimum	2,000 gallons at \$2.50
Next	3,000 gallons at \$0.90 per 1,000 gallons
Next	5,000 gallons at \$0.80 per 1,000 gallons
Next	15,000 gallons at \$0.70 per 1,000 gallons
Next	25,000 gallons at \$0.60 per 1,000 gallons
Next	50,000 gallons at \$0.50 per 1,000 gallons
Next	50,000 gallons at \$0.45 per 1,000 gallons
Next	100,000 gallons at \$0.40 per 1,000 gallons
All Over	250,000 gallons at \$0.35 per 1,000 gallons

Water Rates (Out-of-Town)

Two times the rate for In-Town consumers.

Sewer Service Charge

Fifty per cent (50%) of the water billing of all consumers connected to the sewer system.

The above rates, in the opinion of the Engineer, would produce water income to add 80 per cent to the present income of in-town consumers and would produce an equal amount from annexed areas for the following water income:

Present Income from In-Town	\$27,637.00
Eighty Per Cent Increase (New Rates)	<u>22,110.00</u>
Total In-Town Revenue (New Rates)	\$49,747.00
Proposed Annexation	<u>49,747.00</u>
Total Water Income	<u>\$99,494.00</u>

Adoption of the sewer service charge at 50 per cent of the water billing would then produce \$49,747 for a total water and sewer income, based on the proposed rates, in an amount of \$149,241 annually -- an amount of \$1,939 in excess of the requirements for operation and debt service.

SUMMARY AND CONCLUSIONS

CHAPTER 7

SUMMARY AND CONCLUSIONS

In Chapter 1 it was stated that the purpose of this study was to investigate the feasibility for the Town of Taylorsville to annex certain fringe areas and to offer information to aid in making such a decision. In Chapter 4 it was determined that the town could annex all study areas as one unit, since together they meet the legal requirements of G. S. 160-453.4, Character of Area to be Annexed. In Chapter 5 the analysis of the expenditures and revenues indicated that annexation is less feasible, except perhaps for Area 1. However, it should be remembered that the town could make adjustments in the estimated departmental expenditures and thereby reduce the cost estimates somewhat. If the town does annex, the cost estimates will have to be studied very seriously to find the best balance between cost and revenue which will accrue in each area. In Chapter 6 water and sewer estimates were provided, and on the basis of the high cost the town should not try to bond for such a large amount. The alternative given was to attempt to obtain a grant through the proposed Appalachian Program now under consideration by Congress. Without this grant annexation of the size proposed in this report cannot be undertaken.

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